Final script from "Adult Immunization Update" satellite broadcast, June 26, 2003.

Hepatitis A segment.

Hepatitis A vaccine is NOT one of the routinely recommended vaccines for all adults, but it is on the adult schedule to be considered in certain situations. So we will discuss it briefly.

Hepatitis A is a viral infection acquired by fecal oral transmission. Viral replication occurs in the liver. The incubation period of hepatitis A ranges from 15 to 50 days, with an average of about 28 days. The signs and symptoms are not always obvious and they are indistinguishable from other types of Hepatitis. Symptomatic infection occurs most often in older children and adults. The typical clinical picture is an abrupt onset of fever, malaise, anorexia, nausea, abdominal discomfort, dark urine and jaundice. Clinical illness usually lasts less than two months, but can last as long as six months.

Hepatitis A is a common infection. The highest incidence is among children less than 15 years of age who are often the source of infection for older children and adults.

Unlike hepatitis B virus, infection with hepatitis A virus does not lead to chronic infection. So complications of hepatitis A are related to the acute disease. 10% to 20% of people with symptomatic hepatitis A require hospitalization. The overall case fatality rate is about 0.3%, one in 330 REPORTED cases. But the fatality rate may be as high as 2% among people forty years of age and older. Death is caused by fulminant hepatitis and liver failure.

The most frequently reported source of hepatitis A infection in the U.S. is household or sexual contact with a person with hepatitis A. This source accounted for about a quarter of reported cases. Day care attendance or employment accounts for about 15% of cases and about 5% have a history of recent international travel. About 3% of cases are associated with a suspected food or waterborne outbreak, but about half of persons with hepatitis A do not have an identified source of their infection.

Hepatitis A vaccine is a relative newcomer in the United States. The first vaccine was licensed for use in 1995.

Two inactivated whole virus vaccines are available. HAVRIX is GlaxoSmithKline's vaccine. VAQTA is made by the Merck Vaccine Division. The vaccines are considered equivalent and interchangeable. Both vaccines are given as a two dose series – a primary dose followed by a booster 6 to 18 months later. Both vaccines are available in pediatric and adult formulations. The adult formulations are for persons 19 years of age and older.

Hepatitis A vaccines are highly immunogenic, and large trials have produced estimates of 94 to 100% protection against clinical hepatitis. 95% of adults will develop protective antibody within a month following one dose, and 100% will have protective antibody after two doses.

The minimum interval between the first and booster dose of hepatitis A vaccine is six calendar months. If the interval is longer than the recommended 6 to 18 months, it's not necessary to repeat the first dose.

Hepatitis A vaccine is also available in a combination vaccine. Twinrix is produced by GlaxoSmithKline, and was approved by FDA in 2001. It contains a standard adult dose of GlaxoSmithKline's hepatitis B vaccine, Engerix-B, and a pediatric dose of their hepatitis A vaccine, Havrix. The vaccine is administered in a three dose series at zero, one, and 6 to 12 months. Twinrix is approved for adults 18 years of age and older. Schedules using combinations of Twinrix and single antigen hepatitis A vaccine have not been studied. We suggest that you try to complete the schedule with the same vaccine that was used for the first dose or doses.

ACIP recommends hepatitis A vaccination for adults at increased risk of hepatitis A virus infection. The traditional high risk groups targeted for hepatitis A vaccination include international travelers, men who have sex with men, persons who use illegal drugs, and persons with occupational risk for HAV infection. This group is limited to certain laboratory workers and animal handlers, and does NOT include health care workers, or people with occupational exposure to sewage. Vaccination is also recommended for persons with chronic liver disease including hepatitis C. In the absence of other risk factors, persons with chronic liver disease are not at increased risk of HAV infection, but are at increased risk

of complications of hepatitis A.

Hepatitis A vaccine should be administered to people traveling to countries with high or intermediate risk of hepatitis A virus infection. These areas include basically the entire world except Canada, Western Europe, Scandinavia, Japan, New Zealand, and Australia. It's assumed that vaccinated persons are protected by four weeks after receiving the first dose, although the second dose 6-18 months later is still recommended for long term protection. Available data suggest that 40% to 45% of vaccinated people may lack neutralizing antibody at fourteen days after receiving the first dose. No data are currently available regarding the risk of hepatitis A among persons vaccinated two to four weeks before departure. Protection following hepatitis A vaccine might not be complete until four weeks after vaccination. So ACIP recommends that immune globulin be administered to people traveling to a high or intermediate risk area less than 4 weeks after the first dose of vaccine. IG should be administered as a separate injection at a different anatomic site.

For both hepatitis A vaccines, the most commonly reported adverse reaction following vaccination is a local reaction at the site of injection. Injection site pain, erythema, or swelling is reported in 20 to 50% of recipients. These symptoms are generally mild and self limited. Mild systemic reactions, such as malaise, fatigue, and low grade fever are reported in less than 10% of recipients. No serious adverse reactions have been reported.

Hepatitis A vaccine should not be administered to persons with a history of a severe allergic reaction to a vaccine component or following a prior dose. Vaccination of persons with moderate or severe acute illnesses should be deferred until the patient has improved.

The safety of hepatitis A vaccination during pregnancy has not been determined. However, because it is an inactivated vaccine, the theoretical risk to the fetus is low. The risk associated with vaccination should be weighed against the risk for HAV infection. Because hepatitis A vaccine is inactivated, no special precautions are needed when vaccinating immunocompromised persons.

Routine hepatitis A vaccination of children is preventing a

substantial number of HAV infections. Vaccination of children also eliminates a major SOURCE of infection for other children and adults- the groups that tend to get more severe disease.

Foodborne outbreaks of hepatitis A do make the news often. ACIP does not recommend ROUTINE hepatitis A vaccination of food handlers. But the ACIP recommendations give a lot of leeway to state and local public health authorities to institute vaccination of food handlers, based on local circumstances. In fact, several counties have already mandated vaccination of food handlers to try to reduce the risk of food borne outbreaks. So far, we have no data regarding the impact of this measure.

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